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Bluebunch Wheatgrass (*Agropyron spicatum*)

1920 to 1964

A BIBLIOGRAPHY

compiled by MARIE L. GOULD

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This bibliography is for the use of the Pacific Northwest Forestry Research Station, U.S. Forest Service. It contains influences on the growth of the forest. The articles are arranged alphabetically by author.

Annotations amplify the information given in the titles. This additional data was the result of examining the publications or reading available reviews of the material. Items also include foreign publications and are listed for the years 1920 to date.

Sources consulted were: Bibliography of Agriculture, v. 2, 1943, to v. 28, 1964; Herbage Abstracts, v. 1, 1931, to v. 33, 1963; Herbage Reviews, v. 1, 1933, to v. 8, 1940; Portland Forest Service Library card catalog; and Portland Forest Service Library pamphlet collection.

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BIBLIOGRAPHY

Blaisdell, J. P.

1953. Ecological effects of planned burning of sagebrush-grass range on the upper Snake River plains. U.S. Dept. Agr. Tech. Bul. 1075, 39 pp. See also Herb. Abs. 24: 83 (416).

A. spicatum was one of the grasses making the most rapid recovery after burning.

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1958. Seasonal development and yield of native plants on the upper Snake River plains and their relation to certain climatic factors. U.S. Dept. Agr. Tech. Bul. 1190, 68 pp.

Blaisdell, James P., and Pechanec, Joseph F.

1949. Effects of herbage removal at various dates on vigor of bluebunch wheatgrass and arrowleaf balsamroot. Ecology 30: 298-305.

Wiese, A. C., and Hodgson, C. W.

1952. Variations in chemical composition of bluebunch wheatgrass, arrowleaf balsamroot, and associated range plants. Jour. Range Mangt. 5: 346-353. See also Herb. Abs. 23: 40-41 (216).

Branson, F. A.

1956. Quantitative effects of clipping treatments on five range grasses. Jour. Range Mangt. 9: 86-88. See also Herb. Abs. 27: 31 (98).

Root and shoot production of *A. spicatum* was studied.

Christensen, E. M.

1963. The foothill bunchgrass vegetation of central Utah. Ecology 44: 156-158. See also Herb. Abs. 33: 264 (1981).

A. spicatum is the leading dominant. Composition changes associated with disturbance, mainly overgrazing, are given.

Cooper, H. W.

1953. Amounts of big sagebrush in plant communities near Tensleep, Wyoming, as affected by grazing treatment. Ecology 34: 186-189. See also Herb. Abs. 23: 165-166 (938).

With moderate grazing, *A. spicatum* replaced other species.

Costello, D. F.

1944. Efficient cattle production on Colorado ranges. Colo. Ext. Serv. Bul. 383-A, 16 pp.

Under light use range improved, showing increase of *A. spicatum*.

_____ and Price, R.

1939. Weather and plant development data as determinants of grazing periods on mountain range. U.S. Dept. Agr. Tech. Bul. 686, 30 pp. See also Herb. Abs. 10: 121 (609).

Gambel oak-brush zone (6,500-8,000 ft.) includes *A. spicatum*.

Craddock, G. W., and Forsling, C. L.

1938. The influence of climate and grazing on spring-fall sheep range in southern Idaho. U.S. Dept. Agr. Tech. Bul. 600, 42 pp. See also Herb. Abs. 8: 425-426 (2031).

A. spicatum a dominant species on range.

Daubenmire, R.

1960. An experimental study of variation in the *Agropyron spicatum*-*A. inerme* complex. Bot. Gaz. 122: 104-108. See also Herb. Abs. 31: 322 (1917).

Daubenmire, R. F.

1940. Plant succession due to overgrazing in the *Agropyron* bunch-grass prairie of southeastern Washington. Ecology 21: 55-64. See also Herb. Abs. 10: 181-182 (923).

A. spicatum contributes 85% of the herbage in certain protected areas.

Dewey, D. R.

1964. Natural and synthetic hybrids of *Agropyron spicatum* X *Sitanion hystrix*. Torrey Bot. Club. Bul. 91(5): 396-405.

These hybrids are usually completely sterile.

- _____ 1960. Salt tolerance of twenty-five strains of *Agropyron*. Agron. Jour. 52: 631-635. See also Herb. Abs. 31: 280 (1598).

A. spicatum is not salt tolerant.

Evanko, Anthony B., and Peterson, Roald A.

1955. Comparisons of protected and grazed mountain rangelands in southwestern Montana. Ecology 36: 71-82. See also Herb. Abs. 26: 192 (927).

Five areas with *A. spicatum* were studied.

Fischer, G. W.

1936. The susceptibility of certain wild grasses to *Tilletia tritici* and *Tilletia levis*. Phytopathology 26: 876-886. See also Herb. Abs. 6: 406.

Includes *A. spicatum*.

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1939. Studies on the susceptibility of forage grasses to cereal smut fungi. III. Further data concerning *Tilletia levis* and *T. tritici*. Phytopathology 29: 575-591. See also Herb. Abs. 9: 351 (1743).

A. spicatum is a host to wheat bunt fungi.

and Claassen, C. E.

1944. Studies of stem rust (*Puccinia graminis*) from *Poa ampla*, *Avena fatua*, and *Agropyron spicatum* in the Pullman, Washington, region. Phytopathology 34: 301-314. See also Herb. Abs. 14: 326 (1630).

Hafenrichter, A. L., Mullen, Lowell A., and Brown, Robert L.

1949. Grasses and legumes for soil conservation in the Pacific Northwest. U.S. Dept. Agr. Misc. Pub. 678: 27.

Hanson, W. R., and Stoddart, L. A.

1940. Effects of grazing upon bunch wheat grass. Amer. Soc. Agron. Jour. 32: 278-289. See also Herb. Abs. 10: 230 (1159).

A. spicatum was an original dominant.

Harris, R. W.

1954. Fluctuations in forage utilization on ponderosa pine ranges in eastern Oregon. Jour. Range Mangt. 7: 250-255. See also Herb. Abs. 26: 160 (730).

A. spicatum is a dominant species on the grassland.

Hartung, Marguerite E.

1946. Chromosome numbers in *Poa*, *Agropyron* and *Elymus*. Amer. Jour. Bot. 33: 516-531. See also Herb. Abs. 17: 88 (513).

A. spicatum has two chromosome races.

Heady, H. F.

1949. Studies on bluebunch wheatgrass (*Agropyron spicatum*) in Montana and height-weight relationships of certain range grasses. Nebr. Univ. Abs. Doctoral Diss. 10: 39-42. See also Bibliog. Agr. 1950: 18240.

Heady, H. F.

1950. Studies on bluebunch wheatgrass in Montana and height-weight relationships of certain range grasses. Ecol. Monog. 20: 55-81.

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1952. Reseeding, fertilizing and renovating in an ungrazed mixed prairie. Jour. Range Mangt. 5: 144-149. See also Herb. Abs. 23: 10 (60).

A. spicatum was a dominant species.

Hoover, M. M.

1939. Native and adapted grasses for conservation of soil and moisture in the Great Plains and Western States. U.S. Dept. Agr. Farmers' Bul. 1812, 44 pp., illus.

A. spicatum is native (p. 6).

Hull, A. C., Jr., and Stewart, G.

1948. Replacing cheatgrass by reseeding with perennial grass on southern Idaho ranges. Amer. Soc. Agron. Jour. 40: 694-703. See also Herb. Abs. 19: 89-90 (382).

A. spicatum may be used on drier areas.

Humphrey, R. R.

1943. A history of range use and its relation to soil and water losses of the Walla Walla river watershed, Washington and Oregon. Northwest Sci. 17: 82-87. See also Herb. Abs. 14: 240 (1199).

Before white settlement (about 1860) the soils were stabilized by the native vegetation which included *A. spicatum*.

and Miller, A. E.

1945. Range condition. A classification of the bunchgrass forage type in the Kittitas Soil Conservation District. U.S. Soil Conserv. Serv. 13 pp. See also Herb. Abs. 16: 313 (1823).

Hurd, R. M., and Pearse, C. K.

1944. Relative palatability of eight grasses used in range re-seeding. Amer. Soc. Agron. Jour. 36: 162-165. See also Herb. Abs. 14: 315 (1565).

Experiments leading to more uniform utilization of the range. *A. spicatum* is included.

Hyder, D. N., and Sawyer, W. A.

1951. Rotation-deferred grazing as compared to season-long grazing on sagebrush-bunchgrass (*Agropyron spicatum*) ranges in Oregon. Jour. Range Mangt. 4: 30-34. See also Bibliog. Agr. 1951: 19120.

_____ and Sneva, F. A.

1961. Fertilization on sagebrush-bunchgrass range, a progress report. Oreg. Agr. Expt. Sta. Misc. Paper 115, 36 pp. See also Bibliog. Agr. 1962: 18298.

Ikeler, K. C.

1943. Resource management studies on the dry ranges of southeastern Oregon. Jour. Forestry 41: 561-564. See also Herb. Abs. 14: 275 (1359).

A. spicatum in a sage-grass association at 5,000 feet.

Laumont, P., and others.

1954. Notes sur le comportement en Algérie de quelques espèces fourragères du genre *Agropyrum*. Inst. Agr. Algér, Ann. 8(5), 40 pp. See also Herb. Abs. 26: 31 (125).

Information on distribution and behaviour in the USA is also given. *A. spicatum* was tested.

Lavin, F., and Springfield, H. W.

1955. Seeding in the southwestern pine zone for forage improvement and soil protection. U.S. Dept. Agr. Handbk. 89, 52 pp. See also Herb. Abs. 27: 15 (22).

A. spicatum did not show good adaptation.

Leithead, H. L.

1960. Grass management pays big dividends. Jour. Range Mangt. 13: 206-210. See also Herb. Abs. 31: 272-273 (1549).

A. spicatum was a dominant species in the area studied.

McCall, R.

1937. The digestibility of range bunch grasses fed alone and supplemented to sheep. Mont. Agr. Expt. Sta. Herb. Rev. 5: 164.

McIlvanie, S. K.

1942. Carbohydrate and nitrogen trends in bluebunch wheatgrass, *Agropyron spicatum*, with special reference to grazing influences. Plant Physiol. 17: 540-557. See also Herb. Abs. 13: 242 (1306).

Mason, J. L., and Miltimore, J. E.

1959. Increase in yield and protein content of native bluebunch wheatgrass from nitrogen fertilization. *Canad. Jour. Plant Sci.* 39(4): 501-504. See also *Herb. Abs.* 30: 97 (471).

Mitchell, G. J., and Cormack R. G. H.

1960. An evaluation of big game winter range in southwestern Alberta. *Jour. Range Mangt.* 13: 235-239. See also *Herb. Abs.* 31: 188-189 (1051).

Effects of grazing on *A. spicatum* are studied.

Moomaw, J. C.

1957. Some effects of grazing and fire on vegetation in the Columbia Basin region, Washington. *Diss. Abs.* 17(4): 733. See also *Herb. Abs.* 27: 261 (1339).

Under grazing, *A. spicatum* decreased in all habitat types.

Morris, H. E., Booth, W. E., Payne, G. F., and Stitt, R. E.

1950. Important grasses on Montana ranges. *Mont. Agr. Expt. Sta. Bul.* 470: 24-25.

Nielson, A. B.

1940. Management - a cure for overgrazed range. *Amer. Soc. Agron. Jour.* 32: 602-606. See also *Herb. Abs.* 10: 367 (1822).

Range study to determine the relative rate of recovery of two key species--one, *A. spicatum*.

Packer, P. E.

1953. Effects of trampling disturbance on watershed condition, run-off, and erosion. *Jour. Forestry* 51: 28-31. See also *Herb. Abs.* 23: 157-158 (886).

A. spicatum was a dominant species.

Passey, H. B., and Hugie, V. K.

1963. Some plant-soil relationships on an ungrazed range area of southeastern Idaho. *Jour. Range Mangt.* 16: 113-118. See also *Herb. Abs.* 33: 264 (1979).

A. spicatum is one of the most important grasses.

_____ and Hugie, V. K.

1963. Variation in bluebunch wheatgrass in relation to environment and geographic location. *Ecology* 44: 158-161. See also *Herb. Abs.* 33: 264-265 (1987).

Payne, G. F.

1960. Response of two range grasses to foliate removal. Mont. Acad. Sci. Proc. 19: 126-129. See also Bibliog. Agr. 1960: 91145.

A. spicatum is one of the grasses.

Pechanec, J. F.

1937. A comparison of some methods used in determining percentage utilization of range grasses. Jour. Agr. Res. 54: 753-765. See also Herb. Abs. 7: 365.

A. spicatum as a dominant range grass.

____ Pickford, G. D., and Stewart, G.

1937. Effects of the 1934 drought on native vegetation of the upper Snake River plains, Idaho. Ecology 18: 490-505. See also Herb. Abs. 8: 298 (1421).

A. spicatum a dominant grass.

Pickford, G. D.

1940. Range survey methods in western United States. Herb. Rev. 8(1): 5.

- ____ 1948. Forage utilization on summer cattle ranges in eastern Oregon. U.S. Dept. Agr. Cir. 796, 27 pp. See also Herb. Abs. 19: 165 (755).

A. spicatum was one of the most important forage grasses.

Plummer, A. P.

1943. The germination and early seedling development of twelve range grasses. Amer. Soc. Agron. Jour. 35: 19-34. See also Herb. Abs. 13: 201 (1057).

A. spicatum is one of the 12 grasses.

Rasmussen, L. H.

1954. Bluebunch wheatgrass (*Agropyron spicatum*). Cow Country 81(10): 20. See also Bibliog. Agr. 1954: 48350.

Robertson, J. H., and Pearse, C. K.

1946. Give your range seedlings a chance--reduce sagebrush and cheatgrass. Amer. Cattle Producer, May. (Pagination not available.) See also Herb. Abs. 18: 76 (356).

A. spicatum showed large increases when *Bromus tectorum* was reduced.

Robertson, J. H., and Weaver, L. A.

1942. A new tetraploid wheatgrass from Nevada. Torrey Bot. Club Bul. 69: 434-437. See also Herb. Abs. 13: 367 (1964).

A giant form of *Agropyron spicatum*.

Rockie, W. A.

1939. Man's effects on the Palouse. Geog. Rev. 29: 34-45. See also Herb. Abs. 9: 184-185 (837).

Before being ploughed for wheat *A. spicatum* was a dominant species. After, none remained.

Sampson, A. W., and Chase, A.

1927. Range grasses of California. Calif. Agr. Expt. Sta. Bul. 430, 94 pp.

A. spicatum, especially forage value and reproduction, pp. 81-82.

_____ Chase, A., and Hedrick, D. W.

1951. California grasslands and range forage grasses. Calif. Agr. Expt. Sta. Bul. 724, 130 pp.

A. spicatum, especially distribution, habitat, p. 63.

Slanger, B.

1951. Bluebunch wheatgrass (*Agropyron spicatum*). Mont. Stock-grower 23(9): 12. See also Bibliog. Agr. 1952: 1457.

Smith, D. C.

1944. Pollination and seed formation in grasses. Jour. Agr. Res. 68: 79-95. See also Herb. Abs. 14: 228-229 (1133).

A. spicatum produced very few seeds when subjected to self-pollination.

Spilsbury, R. H., and Tisdale, E. W.

1944. Soil-plant relationships and vertical zonation in the southern interior of British Columbia. Sci. Agr. 24: 395-436. See also Herb. Abs. 14: 350-351 (1762).

All three grassland zones are dominated by perennial bunchgrasses, particularly *A. spicatum*.

Sprague, R.

1934. The association of *Cercospora herpotrichoides* with the *Festuca* consociation. Phytopathology 24: 669-676. See also Herb. Abs. 4: 262.

A. spicatum as an indicator plant.

Stark, R. H.

1946. Results of cultural trials in the establishment of perennial forage species on abandoned farmland in southeastern Idaho. Northwest Sci. 20: 39-40. See also Herb. Abs. 17: 118 (638).

A. spicatum established under rainfall conditions of 9 inches per annum.

Hafenrichter, A. L., and Moss, W. A.

1950. Adaptation of grasses for soil and water conservation at high altitudes. Agron. Jour. 42: 124-127. See also Herb. Abs. 20: 144 (838).

A. spicatum was tested for adaptation to high-altitude, semiarid conditions.

Toevs, J. L., and Hafenrichter, A. L.

1946. Grasses and cultural methods for reseeding abandoned farm lands in southern Idaho. Idaho Agr. Expt. Sta. Bul. 267, 36 pp. See also Herb. Abs. 17: 9 (38).

A. spicatum included as a new species.

Stoddart, L. A.

1945. Chemical composition of wheatgrass (*Agropyron spicatum*) and its response to season. Farm & Home Sci. (Utah Sta.) 6(2): 5, 15. See also Bibliog. Agr. 1945: 6303.

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1946. Some physical and chemical responses of *Agropyron spicatum* to herbage removal at various seasons. Utah Agr. Expt. Sta. Bul. 324, 24 pp. See also Herb. Abs. 17: 123 (665).

Tisdale, E. W.

1947. The grasslands of the southern interior of British Columbia. Ecology 28: 346-382. See also Herb. Abs. 18: 71 (334).

Three communities are linked by the species *A. spicatum*.

U. S. Department of Agriculture.

1936. The vegetation factor in erosion control; *Agropyron spicatum*. Herb. Rev. 4(1): 19.

Washington Agricultural Experiment Station.

1932. Annual report for the fiscal year ended June 30, 1932, 42nd. Bul. 275. (Pagination unknown.) See also Herb. Abs. 3: 217.

Projects include nutritive value of range grasses (*A. spicatum*).

Wright, J. C., and Wright, E. A.

1948. Grassland types of South Central Montana. Ecology 29: 449-460. See also Herb. Abs. 19: 139 (628).

A. spicatum here is correlated with sandy soils.

Wyoming Agricultural Experiment Station.

n.d. Range research progress report 1960. Mimeo. Cir. 145, 31 pp.
(3) Selection and improvement of species for desert areas
(W. A. Riedl, L. Nelson, W. W. Ellis and R. L. Lang) in
which...*A. spicatum*...is being studied. See also Herb.
Abs. 32: 77 (509).

Young, P. A.

1937. Natural infection of grasses with *Puccinia graminis*.
Phytopathology 27: 1028. See also Herb. Abs. 8: 85 (402).

A. spicatum was damaged in nursery rows.

Young, V. A.

1943. Changes in vegetation and soil of Palouse Prairie caused
by overgrazing. Jour. Forestry 41: 834-838. See also
Herb. Abs. 14: 353 (1771).

There is now only a small percentage of *A. spicatum*
in the drier parts.

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